AVANTI
Stop leaks. Stabilize soil.
Control groundwater. Permanently.

TECHNICAL DATA SHEET

AV-248 Flexseal™

with AV-249 Flexseal AC™ Catalyst

Hydrophobic Polyurethane Grout

Description

AV-248 Flexseal™ is a moisture activated MDI-based polyurethane resin. The water/moisture activation is a two-step chemical reaction and is catalyzed by mixing AV-249 Flexseal AC™ with AV-248. Injected as a single component, AV-248 is designed to react quickly with moisture to seal active and potential water leaks in cracks or small annular spaces that are susceptible to wet/dry cycles and where flexibility is needed. AV-248 should always be injected into small, narrow, confined spaces to provide restricted expansion of the grout. AV-248 cures flexible and impermeable.

Applications

- For use above or below grade in humid or arid atmospheres
- Fills various cracks and pipe penetrations
- Stops leaks in concrete structures
- Designed for tunnels, mines, dams, reservoirs, block walls and structures that may shift

Features & Benefits

- Free rise expands 400% – 600%
- Solvent-free system
- Controllable reaction time by adjusting AV-249 Flexseal AC volume
- Withstands wet/dry cycles
- Unique hydrophobic that cures flexible and closed cell
- Multiple grouting techniques including Expanded Gasket Placement Technique (EGP) and Variable Pressure Application Technique (V-PAT) – Crack Injection

Required Products

- AV-249 Flexseal AC (catalyst)

How AV-248 Works

AV-248 uncured resin must be injected into a confined space. Fill the space of the crack/joint with unreacted resin. The resin will react with moisture to form a resilient seal accomplished by three mechanisms: first the resin seeks out water in the space and pores of the substrate and adheres to the surface. Second, the resin/water reaction begins to expand forming a tight compressive seal in the confined space and third the network of compressed grout material within all the cracks establishes a mechanical lock. If little or not enough water/moisture is present in the crack/joint to be sealed, water should be flushed through the crack/joint prior to injecting AV-248.

Packaging – product is packaged by net weight

Grout

- Jug – 8 lbs. (3.6 kg)
- Pail – 43 lbs. (19.5 kg)
- Drum – 473 lbs. (214.5 kg)

Catalyst

- Container - 16 fl. oz. (0.48 L)

Physical Properties*

UNCURED AV-248	
Appearance	Milky white to clear liquid
Viscosity (water=1)	550 – 830 cP @ 72°F (22°C)
Flash Point	>200°F (>93°C)
Specific Gravity (water=1)	1.036 @ 72°F (22°C) ±3%
Density	8.64 lbs./gal ± 3% (1.036 kg/L ± 3%)
CURED AV-248	
Appearance	Milky colored, flexible

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Tensile Strength	*Consult Avanti Representative*
Toxicity	Non-toxic
AV-249	
Appearance	Light yellow to white, clear liquid
Viscosity (water=1)	15 - 25 cP @ 72°F (22°C)
Flash Point	>200°F (>93°C)
Specific Gravity	0.95 @ 72°F (22°C) ±3%
Density	7.93 lbs./gal ± 3% (0.95kg/L ± 3%)

** Laboratory results*

Mix Guidelines

Gently shake or stir container(s) before using. Typically, one container of AV-249 Flexseal AC is used per pail of AV 248 Flexseal. Depending on the desired reaction time, AV-249 may be doubled (See Cream / Gel (Cure) Times chart below). Mix thoroughly, but slowly, to avoid creating bubbles in the solution. The times presented are laboratory results. Actual results may be different in the field due to site water used or site conditions. Perform a standard cup test with site water to determine the desired reaction time.

Cream / Gel (Cure) Times for AV-248 Flexseal (Min:Sec) [1,2]				
		Half Catalyst (8 oz.) 80:1	**Full Catalyst (16 oz.) 40:1**	**Double Catalyst (32 oz.) 20:1**
Temperature	40°F/4°C	2:29 / 10:37	2:07 / 8:39	1:12 / 5:23
	50°F/10°C	2:02 / 8:51	1:38 / 6:57	1:01 / 4:44
	60°F/15°C	1:42 / 7:52	0:58 / 6:10	0:47 / 4:30
	70°F/21°C	0:58 / 7:21	0:42 / 5:24	0:33 / 4:09
	80°F/27°C	0:37 / 7:02	0:35 / 4:55	0:29 / 3:42

** Laboratory results*

Note: Do not use more than double AV-249 catalyst per pail of AV-248.

1. Resin and water temperatures may affect cream / gel times.

2. Actual results may be different in the field due to site water used or site conditions.

Performance

For the best results, use AV-248 between 60°F – 90°F (16°C – 32°C). Flush equipment with AV-208 Technical Grade Acetone™ before and after use to remove moisture and clean equipment. Performance will be influenced by site conditions. If site temperatures are low, use a heat source to warm to ~72°F (22°C) and/or increase catalyst amount by 1% – 2%. Do not exceed more than 32 fl. oz. (1.0 L) of AV-249 per pail of the AV-248 resin. Do not use open flame as a heat source. At temperatures of 45°F (7°C), the viscosity of the product is significantly increased, making the miscibility with the reaction-water more difficult. Excess amounts of AV-249 may adversely affect performance. Catalyzed resin will react with moisture from the air, use product soon after mixing. The times presented are laboratory results. Actual results may be different in the field due to site water used or site conditions. Perform a standard cup test with site water to determine the desired reaction time.

Cleaning

Do not use water to clean equipment. AV-248 is water-activated and will setup or cure in your hoses and equipment. Flush with AV-284 Pump Wash™ to remove uncured resin in hoses and equipment. Purge equipment and hoses with AV-208 Technical Grade Acetone™ before use to remove any remaining AV-284 and moisture.

- AV-208 Technical Grade Acetone™– removes moisture from equipment (see Performance section)
- AV-222 Cleaner™– removes cured resin from equipment
- AV-284 Pump Wash™ – removes uncured resin from pump hose

Storage
Store in temperatures within or near 45°F – 95°F (7°C – 35°C) in a dry atmosphere. Keep container tightly closed when not in use. Packaged under dry nitrogen to keep moisture out and extend shelf life. Storage of opened/partial containers at the lower range of the recommended storage temperature is not advised as moisture in the air above a partial container might condensate and might cause the grout to premature gel in the container. Avanti does not recommend storing full or partially filled containers of AV-248 that have been catalyzed or mixed with AV-249. Catalyzed grout may react over time or if not stored correctly.

Safety
Always use OSHA-approved personal protective equipment (PPE). Refer to the SDS for complete safety precautions. The Safety Data Sheets and Mixing Guidelines are available 24/7 at avantigrout.com.

Shipping – Motor and Air Freight available

- Not regulated under US DOT Regulations

Notice
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